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PATENTS AND TRADEMARKS

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CERTIFICATE OF MAILING

I certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington D.C. 20231 on October 11, 2002.

Dated: October 11, 2002

Howard F. Mandelbaum

Commissioner for Patents
Washington, DC 20231

Re: U.S. Patent Application Serial No. 10/026,357
A Pipe or the Like, A Female End Ring, and a Method of Manufacturing such a Pipe or the Like
Leblanc
Our Ref: MART0780US

Sir:

Transmitted herewith for filing are an Information Disclosure Statement with form PTO/SB/08A, and seven cited references.

It is requested that the enclosed self-addressed postcard be stamped with the official dating stamp of the U.S. Patent and Trademark Office and returned. If the enclosed papers are considered incomplete in any way, it is also requested that the undersigned be advised by collect telephone call to (212) 239-4162 immediately upon receipt of this correspondence.

Respectfully submitted

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#7 P. Leblanc 12/10/02

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re Application of: Leblanc

For: A Pipe or the Like, A Female End Ring, and a Method of Manufacturing such a Pipe or the Like

Serial No.: 10/026,357

Filed: 12/21/2001

Examiner:

Group Art Unit: 3752

Attorney Docket No.: MART0780US

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Howard F. Mandelbaum

Dated: October 11, 2002.

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October 11, 2002

Commissioner for Patents
Washington D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

Applicant wishes to call to the attention of the Examiner the following prior art which was cited in searches done by the European and French patent offices. Copies of the references are enclosed as is a completed form PTO/SB/08A.

1. U.S. Patent No. 5,180,196

Fig. 6 of U.S. Patent No. 5,180,196 discloses a pipe of the type indicated in the preamble to claim 1 in that it has a longitudinal concrete cylinder on which a female end is arranged by engaging longitudinally on an outside peripheral face of an annular

end of the cylinder, a zone forming a ferrule of a longitudinal female end ring which is consistent with the preamble to claim 26 and which was prefabricated as mentioned in the preamble to claim 38 under conditions such that another zone of this ring forms a longitudinal projecting skirt on a frontal face at the barrel to internally receive another pipe having a different design. However, this document does not disclose the subject-matter of claims 1, 26 and 38.

In the pipe described in this document, sealing between the ferrule of the female end ring and the outside peripheral face at the end of the cylinder is provided by two transverse annular bands that are tightened by screws, locally surround the ferrule, and locally press it against the outside peripheral face at the end of the cylinder, thus also providing mutual fastening by friction between the cylinder and the female end ring.

The use of such bands can limit the applications of a pipe or the like in that the material from which the bands are made, which is dictated by considerations of a mechanical nature, can be incompatible with certain installation conditions for the pipe or the like. Thus, most of the time, selected bands are made of steels of a grade that is a function of criteria concerning traction strength and modulus of elasticity. Such steels are generally vulnerable to corrosion and are consequently unusable whenever the pipes or the like are to be buried, unless they are subjected to

additional anti-corrosion protection and/or treatment which are expensive and of short-term effectiveness.

Moreover, the effectiveness of the seal and the fastening between the ferrule of the female end ring and the outside peripheral face at the end of the cylinder then depends on the magnitude of the transverse pressure between them, which in turn depends on the value of the transverse pressure applied by the annular bonds to the outside of the ferrule, and consequently to a circumferential tension given to the annular bands by screw-tightening.

However, the pressure applied by the bands to the ferrule gives rise to transverse thrust pressure from the ferrule of the female end ring on the outside peripheral face at the end of the cylinder only through the ferrule, provided that the ferrule is able to shrink onto the outside peripheral face of the end of the cylinder from a rest condition in which it was previously engaged on the outside peripheral face.

The ferrule has a natural tendency to oppose such shrinkage from its rest condition so that obtaining mutual transverse thrust pressure between the ferrule of the female end ring and the outside peripheral face of the cylinder with sufficient magnitude to ensure effective sealing between them, and also to ensure that they are effectively fastened together, requires a considerable amount of pressure to be developed between the bands and the ferrule by

putting the bands under circumferential tension, with the risk of causing irremediable damage to the ferrule.

In practice, the desire to avoid any risk of such damage limits the magnitude of the circumferential tension in the bonds and of the pressure they apply to the ferrule, and the tendency of the ferrule to oppose shrinkage means that the magnitude of the transverse thrust pressure actually applied by the ferrule to the outside peripheral face of the cylinder is even smaller. That is, not only is the fastening between them ineffective, but the resulting mutual sealing is also doubtful.

Contrary to the teachings of the cited reference, in the pipe or the like of the present invention, as specified in claim 1, the ferrule is in a state of circumferential elastic tension providing sealing relative to the outside peripheral face by the inside peripheral face applying thereagainst transverse pressure which is circumferentially distributed in a continuous manner. The transverse pressure which is circumferentially distributed in a continuous manner ensures the mutual sealing and can contribute to the mutual fastening by the mutual friction effect, according to claim 2.

In order to enable such an engagement of the ferrule in the state of circumferential elastic tension on the pipe, which is the subject-matter of claim 26, a female end ring is used, the ferrule

of which is elastically expendable circumferentially as mentioned in claim 38.

Claims 1, 26 and 38 each describe the fastening of the ferrule of the female end ring in a state of circumferential elastic tension when the ferrule is on the pipe. They are, therefore, not anticipated by the U.S. Patent No. 5,180,196.

As mentioned in claim 3 for example, it is possible to resort to a bond surrounding the ferrule coaxially and also placed in circumferential tension. Under such circumstances, and contrary to what happens in the case of a female end piece made in accordance with the teaching of the '196 patent, the band is merely optional and does no more than supplement, if necessary, a natural tendency of the ferrule that is placed in a state of circumferential elastic tension on the outside peripheral face of the cylinder to press elastically against the outside peripheral face, tending to establish mutual sealing and, where appropriate, mutual fastening. Thus, for a pipe or the like in accordance with the invention, instead of the ferrule and the band acting against each other in this respect, they become complementary, and the magnitude of the pressure which the band must apply to the ferrule in order to achieve a required magnitude of transverse contact pressure between the ferrule and the outside peripheral face of the end of the cylinder can remain considerably lower than with a pipe or the like in accordance with the teaching of the '196 patent.

For the foregoing reasons, it is seen that U.S. Patent No. 5,160,196 does not anticipate, or render obvious, claims 1, 26, or 38 or any of the remaining claims which depend on them.

2. U.S. Patent No. 5,951,812

U.S. Patent No. 5,951,812 provides a method of joining two pieces of fiberglass reinforced pipe. The joining member includes a cylinder having a wall and including a first end adapted to receive one of the pipe pieces and a second end adapted to receive the other of the pipe pieces. The joining member also includes an inner ring integral with the cylinder wall, the ring extending radially inwardly from the cylinder wall a distance equal to about the width of the pipe wall. The inner ring also has a first side facing the first cylinder end and a second side facing the second cylinder end.

The '812 patent does not disclose elastic tensioning, or the possibility of elastic tensioning, of a ferrule of a female end ring while and after it is mounted on an end of a concrete cylinder.

3. U.S. Patent No. 4,703,940

U.S. Patent No. 4,703,940 discloses a joint sleeve for sealing the ends of adjacent pipe sections. Each pipe section end has a compressible sealing gasket encircling it proximate its end and a shoulder remote its end. The joint sleeve consists of a body able

to encircle the pipe section ends and to compress the sealing gaskets so that an adequate seal is provided when the sleeve is disposed about adjacent pipe section ends. To resist the force imposed upon the sleeve by the rolled gasket which tends to urge the sleeve from the pipe end, the joint sleeve has an inner surface with a flared portion. When the sleeve is positioned on one pipe section end for storage and transport, the compressed gasket by virtue of the flared portion produces an axial force urging the joint sleeve body in a direction opposite the force imposed by the rolled gasket and against the shoulder to hold the sleeve on the one pipe section end. To assemble the pipe sections, the end of the other pipe section is inserted into the sleeve which also results in a force urging the sleeve against the shoulder.

The '940 patent does not disclose elastic tensioning, or the possibility of elastic tensioning, of a ferrule of a female end ring while and after it is mounted on an end of a concrete cylinder.

4. German Utility Model No 297 11 027

No literal translation of this reference is believed to be within the possession, custody, or control, or any individual designated in 37 C.F.R. 1.56(c).

German Utility Model No. 297 11 027 discloses a mutual connection between two pipes, i.e. concrete pipes, by means of a sleeve made from a material which is able to collapse resiliently,

and having at each end an annular inner protrusion able to press on a respective one of the pipes, and by means of a band, e.g. a metallic band, which surrounds the sleeve coaxially, is retained in annular end pockets thereof. Such a sleeve can hardly be regarded as a female end ring which, in a pipe of the type involved with the present invention, such as defined e.g. in the preamble of claim 1, is intended to be fixed permanently to the cylinder and to form an integral assembly therewith, contrary to the case of the sleeve in question. As a matter of fact, the latter is symmetrical and behaves identically with respect to both of the concrete cylinders which it connects.

German '027 is neither concerned with a pipe or the like of the type defined in the preamble to claim 1, nor with a female end ring intended to be an integral part of such a pipe or the like, to which the preamble to claim 26 clearly refers.

It is respectfully submitted that German '027 neither anticipates nor renders obvious claims 1, 26, 38 nor any of the remaining claims dependent on them.

5. French Patent Application No 0 292 918

No literal translation of this reference is believed to be within the possession, custody, or control, or any individual designated in 37 C.F.R. 1.56(c).

French Patent Application No. 0 292 918 discloses a female end ring rigidly nested on a peripheral outer face of an end of a

concrete cylinder and rigidly held thereon, e.g., through welding to a ring anchored in the peripheral outer face. (See page 2, lines 16-19.) Such an arrangement does not embody a circumferential tensioning of the ferrule of the female end ring, a possible circumferential extension of which is not recited in French '918.

It is respectfully submitted that this reference does not anticipate, or render obvious, claims 1, 26, or 38 or any of the other claims dependent on them.

6. German DE 200 16 118 U1

No literal translation of this reference is believed to be within the possession, custody, or control, or any individual designated in 37 C.F.R. 1.56(c).

German DE 200 16 118 U1 which, as stated above, was cited in searches done by the European and French patent offices is not believed to discloses elastic tensioning, or the possibility of elastic tensioning, of a ferrule of a female end ring while and after it is mounted on an end of a concrete cylinder.

7. Swiss No. 364,667

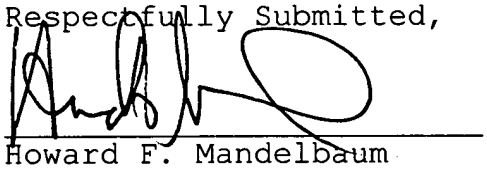
No literal translation of this reference is believed to be within the possession, custody, or control, or any individual designated in 37 C.F.R. 1.56(c). Swiss No. 364,667 which, as stated above, was cited in searches done by the European and French patent offices appears to disclose a pipe joint but is not believed to discloses elastic tensioning, or the possibility of elastic

tensioning, of a ferrule of a female end ring while and after it is mounted on an end of a concrete cylinder.

None of the cited references is believed to disclose or render obvious elastic tensioning, or the possibility of elastic tensioning, of a ferrule of a female end ring while and after it is mounted on an end of a concrete cylinder.

From the foregoing it is believed that none of the cited references affects the claims in the instant application.

Respectfully Submitted,



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